

WHAT IS CLAIMED IS:

1. A semiconductor method for a liquid crystal display, comprising:
providing a substrate;
providing a layer of insulating material over the substrate;
depositing a layer of amorphous silicon over the layer of insulating material;
and
crystallizing the layer of amorphous silicon to form a layer of polysilicon;
treating the layer of polysilicon to change the properties of a surface of the layer of polysilicon;
smoothing the surface of the layer of polysilicon.
2. The method as claimed in claim 1, wherein treating the layer of polysilicon is performed in an environment of ashing, ozone, excimer UV light, oven, hot plate, or rapid thermal processing.
3. The method as claimed in claim 2, wherein smoothing the surface of the layer of polysilicon comprises etching the surface of the layer of polysilicon with one of buffered hydrogen-fluoride, diluted hydrogen-fluoride, or dry etch.
4. The method as claimed in claim 1, wherein treating the layer of polysilicon includes forming a native oxide layer over the layer of polysilicon and increasing a thickness of the native oxide layer.

5. The method as claimed in claim 4, wherein increasing the thickness of the native oxide comprises leaving the substrate with the polysilicon formed thereon in the atmosphere for a period of time.

6. The method as claimed in claim 4, wherein smoothing the surface of the layer of polysilicon comprises etching the surface of the layer of polysilicon with one of buffered hydrogen-fluoride, diluted hydrogen-fluoride, or dry etch.

7. The method as claimed in claim 1, wherein treating the layer of polysilicon includes forming a layer of oxide over the layer of polysilicon.

8. The method as claimed in claim 7, wherein the layer of oxide is formed in performed in an environment of ashing, ozone, excimer UV light, oven, hot plate, or rapid thermal processing.

9. The method as claimed in claim 7, wherein smoothing the surface of the layer of polysilicon comprises etching the layer of oxide with one of buffered hydrogen-fluoride, diluted hydrogen-fluoride, or dry etch

10. A method for making semiconductor device, comprising:
- forming an insulating layer over a substrate;
 - forming an amorphous silicon layer over the insulating layer;
 - forming a polysilicon layer by crystallizing the amorphous silicon layer;

changing properties of a surface of the polysilicon layer; and
smoothing a surface of the changed polysilicon layer.

11. The method as claimed in claim 10, wherein changing the properties of a surface of the polysilicon layer includes treating the polysilicon layer in an environment of ashing, ozone, excimer UV light, oven, hot plate, or rapid thermal processing.

12. The method as claimed in claim 11, wherein smoothing a surface of the changed polysilicon layer comprises etching the surface of the polysilicon layer with one of buffered hydrogen-fluoride, diluted hydrogen-fluoride, or dry etch.

13. The method as claimed in claim 10, wherein changing properties of a surface of the polysilicon layer includes forming a native oxide layer over the polysilicon layer and increasing a thickness of the native oxide layer.

14. The method as claimed in claim 13, wherein increasing the thickness of the native oxide comprises leaving the substrate with the polysilicon formed thereon in the atmosphere for a period of time.

15. The method as claimed in claim 13, wherein smoothing a surface of the changed polysilicon layer comprises etching the surface of the layer of

polysilicon with one of buffered hydrogen-fluoride, diluted hydrogen-fluoride, or dry etch.

16. The method as claimed in claim 10, wherein changing properties of a surface of the polysilicon layer includes forming an oxide layer over the layer of polysilicon.

17. The method as claimed in claim 16, wherein the oxide layer is formed in an environment of ashing, ozone, excimer UV light, oven, hot plate, or rapid thermal processing.

18. The method as claimed in claim 16, wherein smoothing a surface of the changed polysilicon layer comprises etching the layer of oxide with one of buffered hydrogen-fluoride, diluted hydrogen-fluoride, or dry etch.

19. A method for making semiconductor device, comprising:
forming an insulating layer over a substrate;
forming an amorphous layer over the insulating layer;
forming a polysilicon layer using the amorphous layer;
oxidizing a surface of the polysilicon layer; and

etching the oxidized surface of the polysilicon layer to provide a smooth surface for the polysilicon layer.